

## REVIEWS OF THE INDICATORS FOR CRITICAL SUCCESS FACTORS FOR KNOWLEDGE TRANSFER VIA MALAYSIAN GOVERNMENT WEBSITE

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**Abstract:** *This paper reviews the indicators for critical success factors (CSFs) for knowledge transfer (KT) via a Malaysian government website. The indicators are based from knowledge management (KM), customer service (CS) and web-based self-service (WSS) literature. The research explores CSFs from a case study at Department of Education in Malaysia that is known as MASED from the perspective of provider. This research employed interpretive case study with qualitative methods. Primary data derived from interviews with fifteen government officers that are involved in the development and management of government website. Qualitative content analysis by inductive approach was used as analysis technique. From the analysis, 14 CSFs were identified. These CSFs were then being grouped into six themes, namely management role, user focus, employee focus, content focus, technology focus and organisational culture. Then these CSFs were being validated in a focus group to finalise the CSFs for knowledge transfer via Malaysian government website. This research used a single study of one government agency in Malaysia. Therefore, the result may not be applicable to other government departments due to differences of business areas. Nevertheless, this research produces a list of CSFs for strategic management in government agency to consider for development and management of government website.*

**Keywords:** *Critical Success Factors, Knowledge Transfer, Knowledge Management, Customer Service, Web-based Self-Service*

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## Introduction

The aim of this paper is to review the indicators for critical success factors (CSFs) for knowledge transfer (KT) via a Malaysian government education website, from the perspective of provider. The indicators are based from KM, customer service (CS) and web-based self-service (WSS) literature. The research explores CSFs from a case study at Department of Education in Malaysia that is known as MASED. In this research CSFs are defined as “the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organisation” (Rockart, 1979, p. 5). The structure of this paper is as follows: the next sections briefly discuss the definition of e-government, knowledge and KT used for this research context. The subsequent sections discuss the research methods used, for data capture and analysis. The penultimate sections reports and discusses the key findings; followed by a short conclusion that explores the significance of the results and possible further work.

This research define e-government as the utilisation of the Internet particularly website to improve and enhance government operations (Benefit view), to disseminate government information and services (Service view), to acquire knowledge through website (Objective view) and to establish relationship between governments and their stakeholders particularly citizens, employees, business sectors and government agencies (Relational view). This research adapted Szulanski (2000) intra-organisational KT model to identify CSFs for KT via government website. This model has been chosen because it is well accepted and recognised among the researchers. Szulanski (2000) intra-organisational KT model consists of four stages, namely initiation, implementation, ramp-up and integration.

The following paragraph explains potential CSFs for KT via government website. These potential CSFs are the indicators from the three associated concepts that are related to e-government which is KM, CS and WSS. It is important to note that these potential CSFs are only the working indicators that may underpin KT success via government website. The identified CSFs for this research were inductively derived from the empirical work.

KM is important in e-government (Allahawiah & Alsarairh, 2014). An effective KM will result in the employees of an organisation being able to access and apply knowledge to improve their business operations (Shujahat et al., 2017). Management’s role in an organisation is to implement the objectives of that organisation. This role includes leadership that can direct and facilitate KM efforts, supervise projects, support work groups and provide incentives to encourage knowledge sharing and use. Singh (2008) suggests that the productivity of an organisation depends on the management of valid knowledge through suitable styles of leadership.

Casalino (2014) describes that users should take the initiative to be aware of the organisation knowledge and be willing to institutionalise it. For user focus, Phusavat and Anussornnitisarn (2008) report that there are basic needs and services that are critical and constantly needed by citizens including identification or ID cards, copies of household certificates, updating births, deaths and marriage certificates and others basic government services. Wan-Tze et al. (2017) on the other hand, recognise standardisation of the website is one ways to enhance the performance of the website including establishing a common understanding of processes, building on widespread administrative concepts, ensuring interoperable platforms, having administrative domain ontology, defining formats for data interchange and other types of standardisation.

Furthermore, Casalino (2014) contend that sharing knowledge among the employees is one of the important elements in the electronic KM framework for government organisation. Miranda and Tarapanoff (2008) and Newell and Edelman (2008) state that the manual is a form of organisational knowledge, based on individuals' professional knowledge and on the knowledge of groups, that can enhance the capability of users to use websites, and so should be shared across the organisation. For employee focus, Smith (2008) describes that human resource division should match work participant qualifications with requirements of process work tasks and determined by the work participant role model for smooth process execution in an administrative environment. Casalino (2014) on the other hand, noted that the organisation should exercise care to ensure that the knowledge are available to the knowledge consumers, whenever and wherever they want.

Not only that, Casalino (2014) noted that the knowledge assets should be stored in an electronic medium so as to enable efficient and faster access and retrieval. For information communication and technology (ICT) infrastructure Casalino (2014) describes that the organisation should take seriously consideration about the technology in terms of the computing devices, network infrastructure and system software tools that will best fulfil the users' need in order to access the knowledge resources, establish an organisation-wide intranet that offers extensive communicating and collaboration capabilities and ensure that processes and events that relate directly or indirectly to the organisation's strategic direction are automated as computer-based information systems. Also Casalino (2014) outlines that tacit knowledge is best shared through dialogue such as e-mail, discussion groups, expert locators, chat rooms, e-learning through online seminars and virtual classrooms, audio and videoconferencing links and other virtual collaborative workspace.

Also, Casalino (2014) promotes that provider needs to constantly scan the environment for potential opportunities and threats so that the organisation is fully prepared to exploit the entire situation to its advantage, administer and maintain the KM portal and its contents so that it is fully geared to meet the demands of users. For security, Smith (2008) assert that policy formulation, legal drafting and evaluation of policies are vital in the whole governance cycle.

Governments begin to view their citizens as customer by utilising the ICT to develop their national websites to have the necessary tools to meet their citizens' needs (United Nations, 2008). By doing this, government has improved the customer service and increased the satisfaction of customers (Mohd Nazri, 2016). Not only that the usage of ICT to provide customer service makes public sector organisations more citizen-centric (Khan & Krishnan, 2017). Although this research is not going to evaluate service quality on government website, the criteria discuss in this section may be useful since users are expecting to receive quality services from government through website (Allahawiah & Alsaraireh, 2014). Trivellas and Dargenidou (2009) noted that a leader can play role as a director and coordinator in order to provide quality services. Indeed, top management support is an indicator of quality customer services (Castelnovo & Simonetta, 2008; United Nations, 2008). For awareness and notification on services provided by the government, Casalino (2014) describe that users prefer to receive notification services from the website for any information updates. Also, Casalino (2014) believe that usability issues which include how a user perceives and interacts with a website, easy navigation, and appropriate design and creates a positive experience for user are important in designing a website.

Lockett et al. (2008) mentioned that customers are expected business processes to be aligned to the delivery of the customer-centric promises, such as guaranteed service levels,

creativity and convenience. For presentation of knowledge pertaining government services, Hu et al. (2009) stated that website design is one of the determinants of service quality and continuance intention of online services. Also, United Nations (2008) and Perez et al. (2008) report that websites with attractive and simple design allow users to quickly find what they are looking for and the website should be tailored to the needs of its stakeholders. Not only that, Wood et al. (2008) report that user friendly and well-designed websites can increase the effectiveness of information dissemination.

Hu et al. (2009) reveal that manual can assist users with data entry and processing, eliminate human errors and reduce the turnaround time for processing, hence increase the service quality and the continuance intention of online services. For employee focus, the results of the study by Siddiquee (2008) conclude that in the emerging of the technology, Malaysia has introduced several programs in an attempt to address critical challenge of manpower needs. Also, Nadjib Usman et al. (2014) report that government agencies have the obligation to transfer government information to users.

Lawson-Body et al. (2014) claim that lack of accessibility features on the website such as late e-mail response create frustration to users. For the ICT infrastructure, Lockett et al. (2008) contend that ICT infrastructure can improve customer relationship management (CRM) performance. Also, Lockett et al. (2008) mention that customers are encouraged to participate in steering committees and supervisory or advisory boards in order to design the website for meeting customers and businesses' needs. Not only that, Lockett et al. (2008) also mentioned that working as teamwork is important. Furthermore, Hu et al. (2009) stated that security can influence users' perception towards online service quality.

Different based of organisations have make use of the ICT and move their operations to the web to provide services to users. According to Yu et al. (2008) web services are expected to become the key technology to provide services through the web. Cooper et al. (2006) state that web-based self-service (WSS) is a key type of network-based customer service system (NCSS). Nadjib Usman et al. (2014) also assert that WSS can provide customers to access to organisation's support knowledge directly through the internet. In the context of e-government, one-stop government portal has served as WSS for users to access government information and services (Reddick, 2009). By providing WSS to users, government is improving the relationship with users, enhancing customer service and the effectiveness of government operations while reducing costs (Goh et al., 2008). Cooper et al. (2006) report that top management support is always important in any strategic organisational initiative. For awareness and notification on government WSS, communications with key stakeholders, especially the media, and the management of public and media awareness is important in order to motivate users to use the website (Cullen, 2008). Also, study by Cooper et al. (2006) found that usability for WSS includes navigation and search.

Lawson-Body et al. (2014) propose taxonomy of customers' needs amenable to online fulfilment such as knowledge of company about their services offered, new articles, company background, stock information and other information about the company, knowledge about the products and services offered, catalogues, membership services, new products, frequently asked questions (FAQs) and other information about the services. For presentation of knowledge on government WSS, Cullen (2008) promotes online form design that can ease users and to encourage completion includes a single scrolling page, with minimal graphics, reduce download times and support dial-up access. Kim et al. (2008) assert that the webs designer should design web contents which contain maximum information in minimum pages. Also,

Cooper et al. (2006) report that understanding the user's technical capability and infrastructure that includes access, connectivity and availability is critical, to enable both the provider and user to participate in WSS.

Cullen (2008) mentions that in order KM and knowledge sharing are going to be practiced by the staff, it must start from the top level of the management. For employee focus, Cooper et al. (2006) state that management should provide training to support the agent in order to promote knowledge transfer and reuse and improve productivity. Also, Cooper et al. (2006) mention that high quality content in the knowledge base is needed for WSS success.

Lawson-Body et al. (2014) recognise site navigation is an important aspect for website accessibility because users need to conveniently find the sought information on the company website. For the ICT infrastructure, research by United Nations (2008) found that government should provide an infrastructure both within the public sector and across society at large, one based upon reliable and affordable internet connectivity for citizens, businesses and all stakeholders in a given jurisdiction. Also, research by United Nations (2008) found that codes of conduct are a formal documentation in the organisation which identifies values and beliefs held within an organisation that governing behaviour. Furthermore, Cooper et al. (2006) claim that website provider needs to secure system and data privacy.

## **Research Design**

The concept of "success factor" was first discussed by Daniel (1961) in the management literature. It was Rockart (1979) however who first developed a methodology to elicit CSFs. Rockart (1979, p. 5) defines a CSF as "the limited number of areas in which results, if they are satisfactory, will ensure successful competitive performance for the organisation". This research adapted the CSF method which consists of an introductory workshop, one-to-one interviews and a focus group.

Prior to the interviews, a pre-interview preparation schedule and an interview schedule was emailed to each respondent. The pre-interview preparation schedule is given to the respondents as to explain on the research topic and the operation terms so that the respondents have the idea on the research. Whereas, the interview schedule is given to the respondents as to ensure that they are adequately prepared to participate actively and provide useful information during the interview.

The case site for this research is the Department of Education in Malaysia that is called MASED. The researcher provided to MASED with the background of the research and interviewed fifteen participants. The participants are the staff that are involved in the development and management of Malaysian government website including top, middle and operational management level across the department. The interview transcripts were analysed by using inductive qualitative content analysis (Elo & Kyngas, 2008).

The interviews were taped recorded. Then the interviews were transcribed and analysed according to the following steps (Creswell, 2009). (A) Read through all transcripts. (B) Code the data by assigning category names that emerge from the transcripts and provide descriptions. (C) Merge similar categories to form primary categories and provide descriptions. (D) Check categories against literature to support or challenge the categorisations. (E) Group the categories to form themes. (F) Review/Interpret themes.

**Result**

From one-to-one interviews, participants identified 14 CSFs for KT via Malaysia government website. Six themes were emerged from the categories, namely management role, user focus, employee focus, content focus, technology focus and organisational culture. Then, the CSFs were validated in a focus group.

**Management Role Theme**

MASED argued that the leadership role is important, in order to encourage usage of the website and to enforce rules and regulations pertaining to its operation. Leadership is needed to explain, create awareness and support an e-government website development project before, during, after implementation, and throughout ongoing operation. This CSF moves beyond the user of the preceding CSFs, to issues surround particular stakeholders. Management, especially senior officers should support and encourage the usage of the website. They should provide exemplars, create awareness and explain to users the online services. They should also encourage users to follow rules and regulations that have been implemented for the website. They should direct and facilitate KM efforts, supervise projects, support work groups and provide incentives to encourage knowledge sharing and reuse. Also they can play a role as a director and coordinator in order to promote quality services. Refer to Table 1 for the final list of the CSFs for KT via Malaysian government website.

**Table 1: CSFs for KT via Malaysian government website**

CSFs MASED
<p><b>Management role theme</b></p> <ul style="list-style-type: none"> <li>• Leadership</li> </ul> <p><b>User focus theme</b></p> <ul style="list-style-type: none"> <li>• Awareness and notification</li> <li>• Usability: Functionality and navigation</li> <li>• User focus: Understand needs of recipient</li> <li>• Presentation of knowledge</li> <li>• User ICT literacy: Awareness</li> <li>• Education, training and knowledge sharing</li> </ul> <p><b>Employee focus theme</b></p> <ul style="list-style-type: none"> <li>• Employee focus</li> </ul> <p><b>Content focus theme</b></p> <ul style="list-style-type: none"> <li>• Content</li> </ul> <p><b>Technology focus theme</b></p> <ul style="list-style-type: none"> <li>• Accessibility</li> <li>• ICT infrastructure: Availability and functionality</li> <li>• Interactive platform</li> <li>• Security</li> </ul> <p><b>Organisational culture theme</b></p> <ul style="list-style-type: none"> <li>• Attitude and change management</li> </ul>

**User Focus and Employee Focus Theme**

MASED raised awareness and notification, usability, understand the needs of recipient, and presentation of knowledge. MASED further added that they also need to consider the different levels of users’ ICT literacy in order to prepare content and to design appropriate knowledge presentation. MASED also pointed out the importance of providing support training to assist users to access knowledge resources efficiently. Not only that they need to highlight the

knowledge resources available on the website, so raising users' awareness. Users on the other hand must make themselves aware of the knowledge resources available and must be willing to institutionalise the acquired knowledge. MASED highlighted the importance of addressing developer staff capability issues, specifically related to staffing levels, and awareness and understanding of job tasks. MASED argued that management, in particular human resource management (HRM), must be aware of the specific job tasks of the website providers. Further, it is critical that management must provide sufficient, appropriately skilled staff to develop content and operate the website. In the absence of such employees, the quality and delivery of information, knowledge resources and services will suffer, so comprising the achievement of KT by means of the website.

### ***Content Focus Theme***

MASED explicitly raised issues surrounding content, with specific shared references to it being current, accurate, relevant and meeting users' requirements. Further, they raised the importance of informing users of update schedules. MASED's disciplined approach to the preparation of website materials and supports meeting this CSF. MASED has a defined process involving content authors, internal checking and checking by the Information Management Division in place to assure the accuracy of content. Procedures are designed to ensure that content on the website remains current and relevant. In the course of content preparation, MASED includes advice on planned updates so that users can know when to schedule revisits to the website.

### ***Technology Focus Theme***

MASED raised issues that they referred to as "accessibility" and "ICT infrastructure" as important to achieving KT via an e-government website. MASED ensures that knowledge is easy and fast to download from the website. Downloadable items must not be excessively large and must adopt formats that facilitate download. In the case of accessibility the CSFs were tentatively cast as equivalent and taken to the focus groups. There were, however, differences in emphasis that indicated that the ICT infrastructure issues raised should not be treated as equivalent. In the area of ICT infrastructure, MASED placed emphasis on the availability and functionality of the infrastructure. MASED also mentioned that the website should constitute an interactive platform for users to provide suggestions for improvement.

### ***Organisational Culture Focus Theme***

MASED raised attitude and change management as a critical factor. MASED stated that user organisations should be committed to change to new ways of working, informed by the website. Also, they express concern about security of the website, arguing that users' perceptions of security could colour their trust of the knowledge resources delivered. This SF looks to organisational issues surrounding shaping organisational culture, and facilitating change management. As such, it is essential to proactively affect attitude and facilitate appropriate change in both the developer and user communities, to realise the opportunities that come with learning and adopting the new work practices and new ways of processing and performing tasks that are being presented on the website.

## **Conclusion**

This paper reviews the indicators for CSFs for knowledge transfer via Malaysian government website. Also, this paper presents the result of the research. The CSFs identified contribute to

building an understanding of the principles underpinning the delivery of successful government website. Furthermore, the CSFs provide useful guidance for strategic management at other government agencies to consider for ongoing development and management of government website. The CSFs may also become the factor towards the best guideline for KT to happen via government website. Nevertheless, this research used a single study of one government agency in Malaysia which the result may not be generalised. This result set as a foundation for the research in phase two that is currently on-going which is the integration of naqli and aqli in knowledge transfer. The result of that research will be the subject for future publication.

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